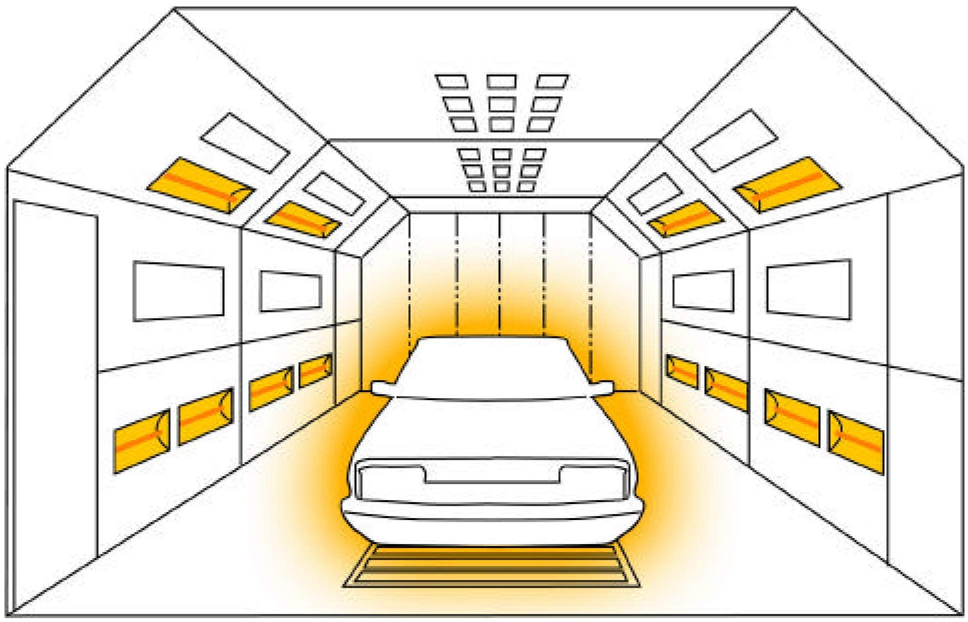
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a SEACHROME company



Infrared Curing Systems

Installation and Operating

Instructions

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DIGITAL 5 ZONE CONTROL

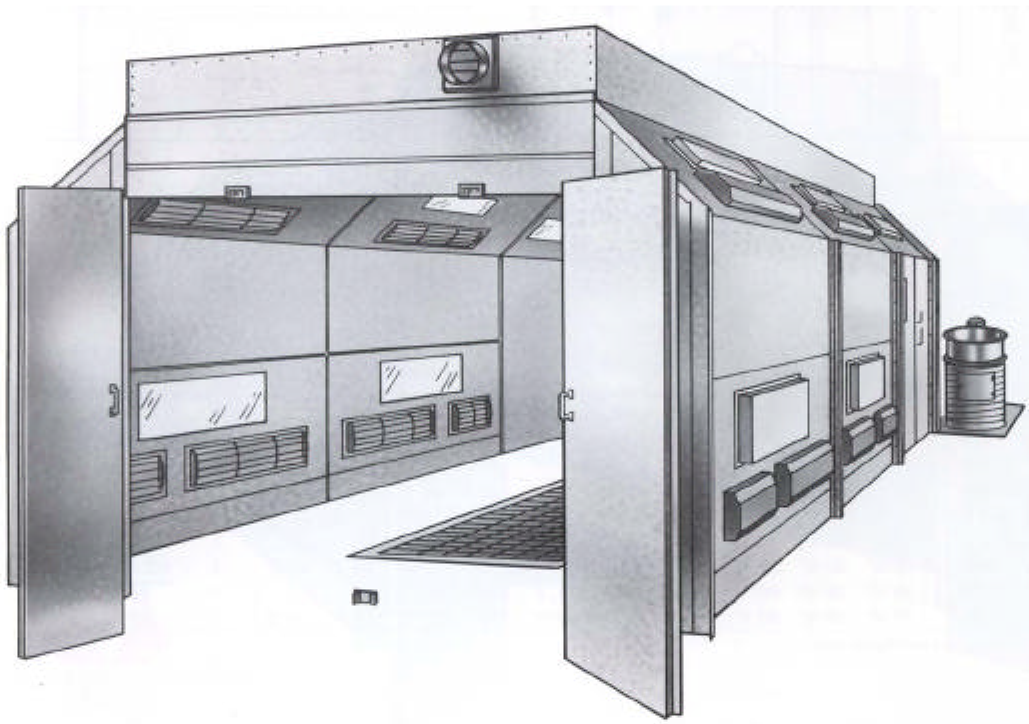
3 PHASE



SPRAY CURE SYSTEM
USER'S MANUAL

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Congratulations on your purchase of **INFRATECH'S** Infrared Curing System. This system has been engineered to give you excellent performance, ease of operation and long life. **INFRATECH** uses the latest technology available in Infrared paint curing and the highest quality components to manufacture this unit.

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OPERATING INSTRUCTIONS

SPRAY PAINTING

1. Make sure the interior of the booth is clean, according to Booth Manufacturer's instructions.
2. All access doors to spray booth must be closed for air solenoid valve to open.
3. Push the start button on the control box for the spray booth. Enter booth and spray vehicle.
4. When vehicle has sufficiently flashed off, open door and move vehicle into oven.

BAKING OR PRE-HEATING

1. Verify all paint material, solvent and equipment is out of the spray booth.
2. Verify vehicle is not closer than 24" from any wall inside the booth.
3. Bi-fold doors in booth/oven center must be closed to complete interlock.
4. Activate necessary zones to give adequate coverage of area to be cured.
5. Push the start button on the control box for bake and then turn on timer for desired bake time.
6. After a 3-minute purge cycle, the heat lamps will come on. Adjust percentage timer if necessary.

RECOMMENDED OPERATING PROCEDURE FOR SETTING INTENSITY

The intensity controller is designed to reduce the "ON" time of the quartz heaters during the bake cycle. The main purpose of the intensity controller is to reduce the intensity and surface temperatures during the bake cycle.

NOTE: Increase intensity until desired results are achieved. When first signs of solvent popping appear, reduce intensity controller 3% and use this setting as maximum for this type of paint.

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CAUTION

NEVER LEAVE CONTAINERS OF FLAMMABLE LIQUID IN OVEN DURING HEAT CYCLE
DO NOT PAINT HEATER TUBES OR REFLECTORS
DISCONNECT POWER BEFORE SERVICING ELECTRICAL EQUIPMENT

INFRARED RADIANT HEATERS
FOR USE IN HAZARDOUS LOCATIONS

INSTALLATION INSTRUCTIONS

1. This system is designed ONLY for Spray Booths in full compliance with the Standard for Spray applications, using flammable and combustible material, NFPA 33.

2. All electrical connections, material placement of this equipment and workmanship must comply with the National Electrical Code NFPA 70.

3. Your Spray Booth must be operated in compliance with Standards for Spray Applications, using flammable and combustible materials, NFPA 33.

4. Your local Fire Marshall and Electrical and/or Building Inspector can help you verify compliance of your equipment and advise on any permits required for this installation.

5. Heaters must be installed in #18 MSG sheet steel. Panel cannot be provided with insulation of any kind.

6. Never install Heaters less than 18” above floor or any vertical surface, 12” from ceiling when set at 45 degree angle.

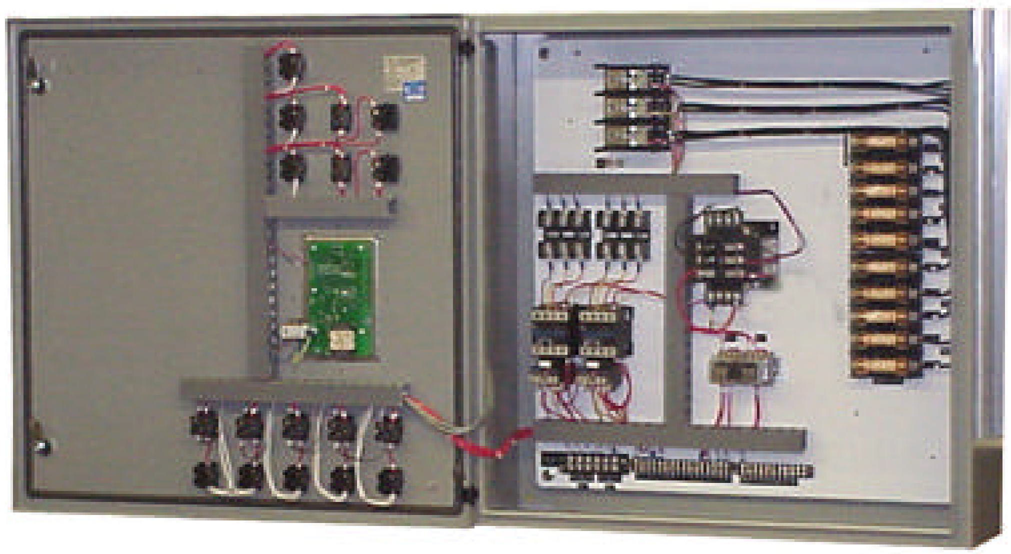
7. Heaters are provided with two Micro Switches and must be wired into an **INFRATECH** SPRAY/CURE CONTROL PANEL such that the heaters cannot be energized when the cover is closed and compressed air to the spray equipment is not provided when cover is open.

8. Refer to Wiring Diagram.

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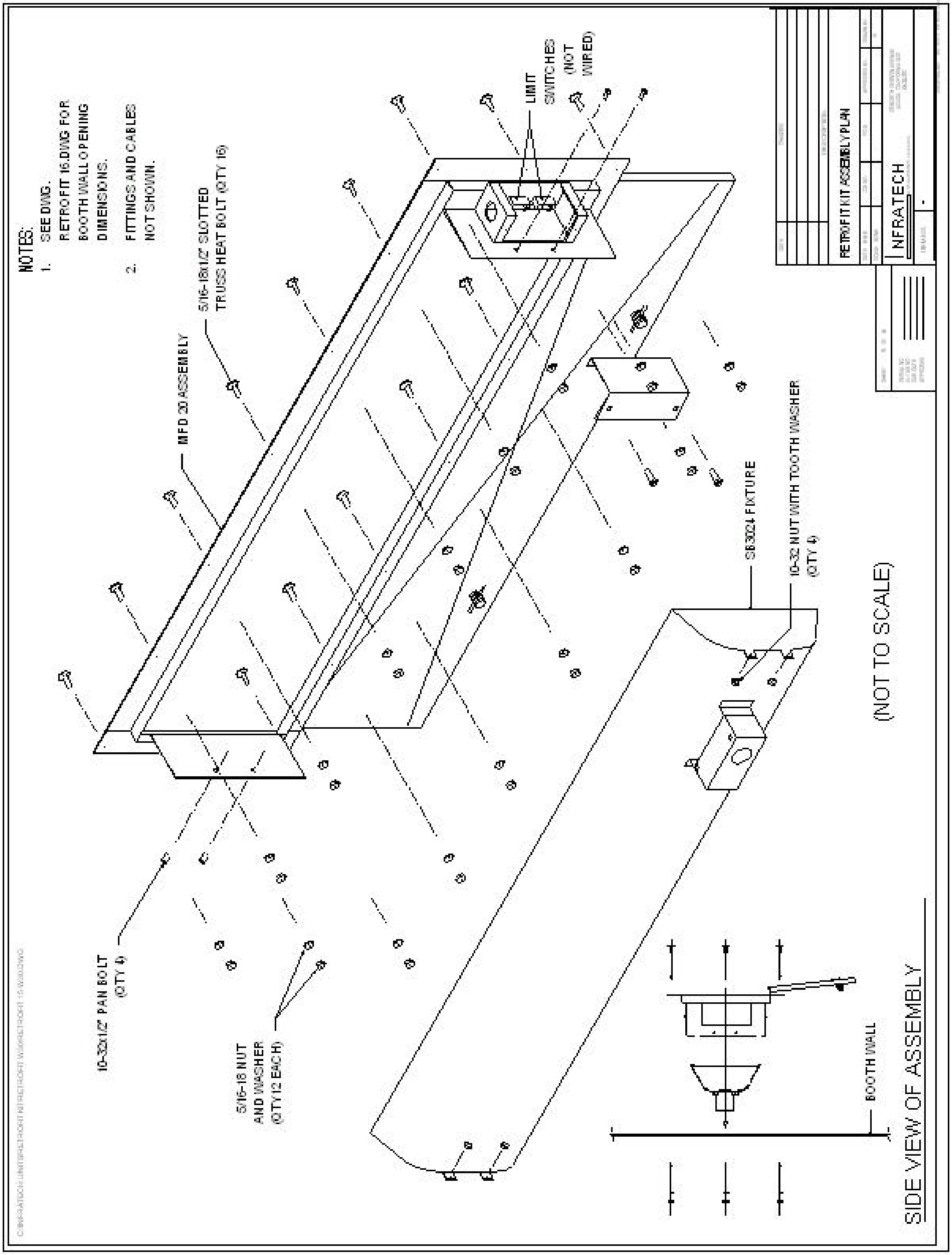
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Inside Control Enclosure



MOUNTING FRAME DETAILS

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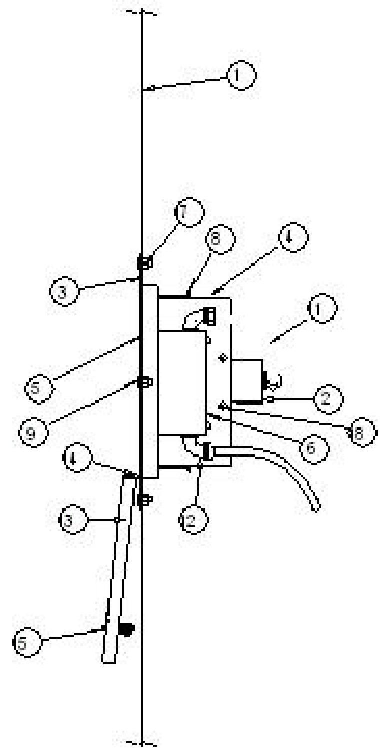
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NOTES:

SIDE VIEW

FOR FRONT VIEW
SEE DWG#
RETROFIT 14 W30.DWG



* NOT SHOWN

PARTS LIST

1	SPRAY BOOTH WALL	-
2	W30 HEATER	RETROFIT 13 W30.DWG
3	FRAME SECTION A	RETROFIT 3 W30.DWG
*	FRAME SECTION B	RETROFIT 2.DWG
5	FRAME SECTION C	RETROFIT 10.DWG
6	J BOX	RETROFIT 11.DWG RETROFIT 12.DWG
*	LIMIT SWITCHES	-
*	HEATER BRACKET	RETROFIT 4.DWG

9	5/16-18x1/2" SLOTTED TRUSS HEAD BOLT (QTY 16)	-
*	LATCH CLIP	RETROFIT 7.DWG
11	CABLE NOT SUPPLIED	
12	FITTINGS NOT SUPPLIED	
13	HEATER DOOR	RETROFIT 5 W30.DWG
14	FLAT HING	RETROFIT 6.DWG
15	LATCH	RETROFIT 9.DWG
*	DOOR STOP BRACKET	RETROFIT 7.DWG

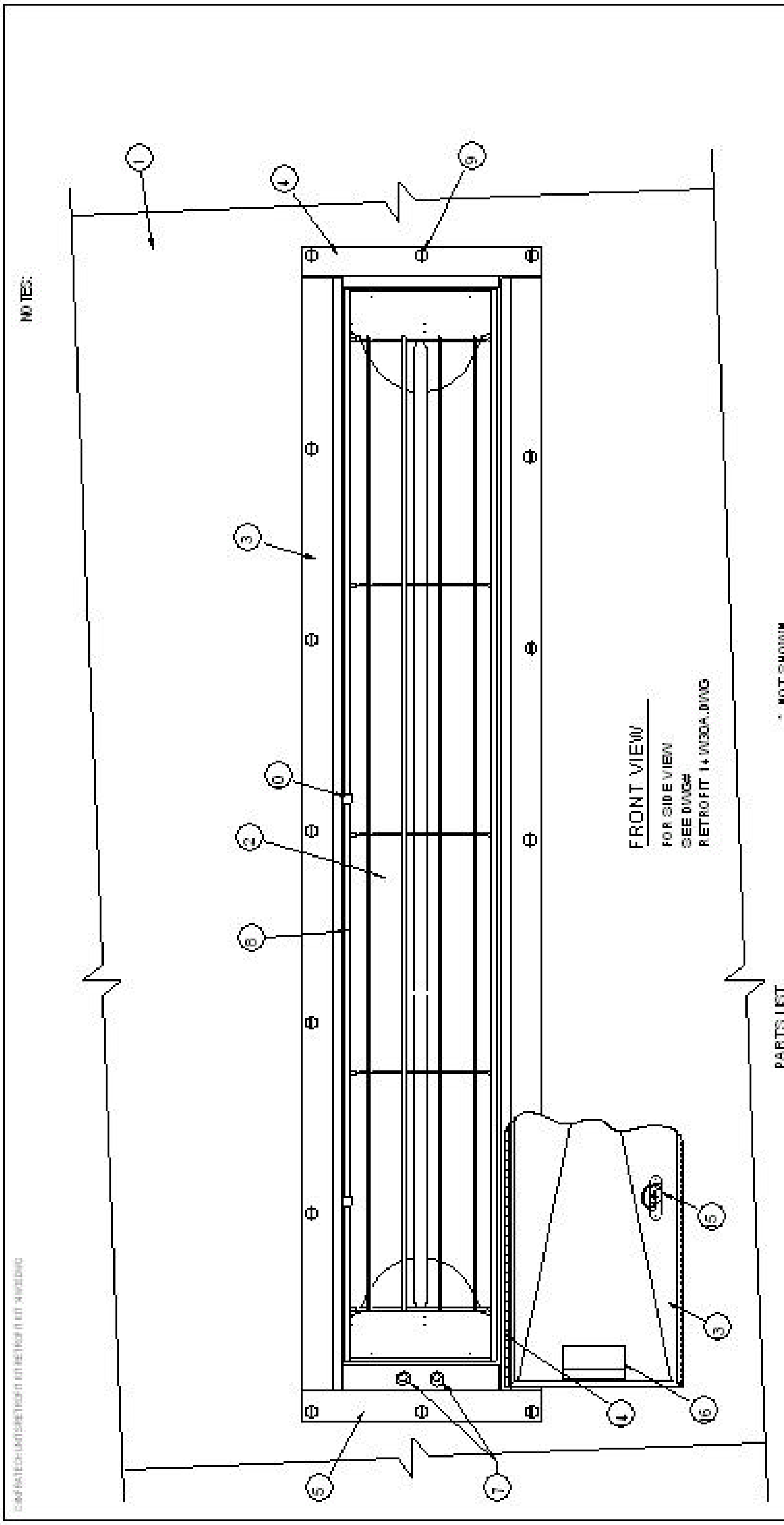
7	5/16-18 NUT & WASHER (QTY 12)
8	10-32x1/2" PAN BOLT & NUT WITH TOOTH WASHER (QTY 4)

INFRARED RETROFIT KIT
SB202-

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PARTS LIST

1	SPRAY BOOTH WALL	-
2	W 30 HEATER	RETROFIT13 W30.DWG
3	FRAME SECTION A	RETROFIT3 W30.DWG
4	FRAME SECTION B	RETROFIT 2 .DWG
5	FRAME SECTION C	RETROFIT 10.DWG
*	J BOX	RETROFIT 11.DWG RETROFIT 12.DWG
7	LIMIT SWITCHES	-
8	HEATER BRACKET	RETROFIT 4.DWG

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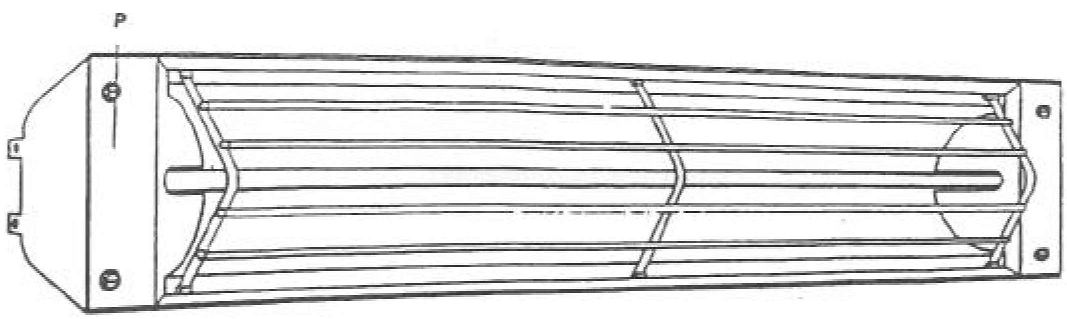
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ALL WEATHER INFRATUBE HEATERS



ASSEMBLY INSTRUCTIONS

NOTE: To prevent breakage, unit is shipped without the element installed

1. Check U/L Label on Heater for proper voltage.

2. Remove end plates (P).

3. Open element clips at each end of Heater and carefully install quartz tube. Remove one nut from end of element. Slip on wire over element screw. Replace nut. **NOTE:** Hold element ceramic firmly while tightening nut to prevent damage to element. Nut should be tightened snug, as loose connection could cause element to fail. Connect other side of element in like manner. Close element clips over tube.

4. Mount Heater in mounting frame.

5. Replace end plates.

6. Clean tube and reflector with alcohol or equivalent.

7. Snap on grill provided.

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DIGITAL CONTROL OPERATING INSTRUCTIONS



Flash Time:	3 Minutes
Cure Time:	30 Minutes
Intensity:	75% Power

With system plugged into power and “READY” light on, *but* prior to starting system, you can change the factory pre-sets.

To Change Flash Time: Press program button until flash time L.E.D. flashes, use arrow up or down buttons to increase or decrease time displayed. When light stops flashing, new time is locked into memory.

To Change Cure Time: Press program button until cure time L.E.D. flashes then use exact same procedure as described above to adjust cure time.

To Change Intensity Setting: Press program button until intensity L.E.D. flashes, use arrow up or down buttons to increase or decrease percent of power output displayed. When light stops flashing, new setting is locked into memory.

Changes made prior to starting the system will be locked into memory until you change settings using the above procedures.

Changes During Operation: With system operating you can change any setting by using the above instructions. **<u>However;</u>** any changes made when the system is operating will not be held in memory after the current operating cycle.

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CURE TIME OF AUTOMOTIVE FINISHES

PAINT TYPE	HEATED AREA	APPROX. CURE TIME	POWER INTENSITY SETTINGS	DISTANCE FROM PANEL
Water Based Primer	4' x 4'	6 min.	80%	24"
Water Based Primer	5' x 6'	10 min.	100%	36"
Solvent Based Primer	4' x 4'	15 min.	80%	24"
Solvent Based Primer	4' x 6'	15 min.	100%	36"
High Solids Clear	4' x 4'	18 min.	80%	24"
High Solids Clear	4' x 6'	20 min.	100%	36"
Urethane Clear Coat	4' x 6'	20 min.	100%	36"
Polyurethane Clear Coat	4' x 6'	20 min.	100%	36"
Acrylic Enamel	4' x 6'	20 min.	100%	36"
Lacquer	4' x 6'	15 min.	100%	36"

*Refer to Operating Instructions for intensity setting procedures

NOTE: The items indicated are ***average*** times for materials from four different major suppliers. Under controlled laboratory conditions, cure time varied after cool down as much as 30-35%. We used #3H pencil hardness, after cool down, as the standard for complete cure. Cure times **increase** at lower temperature settings and **decrease** at higher temperature settings. ***These are INFRATECH recommendations.** Cure times will vary depending on temperature settings.

NOTE

Allow base coat to cool to room temperature before applying clear coat. Polyurethane Clear Coats require 24 hour set time before sanding or buffing after Infrared Cure

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MAINTENANCE

1. Keep your Spray Booth clean! Per the Spray Booth Manufacturer's specifications.

2. Refer to Heater instructions when changing Heater Tubes.

3. **NOTE: Every 3-4 months, remove end reflectors from Heaters and re-check connection of lead wires to end of elements. Unlike some quartz tubes, it is not necessary to worry about oil from your hands damaging the tubes. Tighten the nut on the end of the element per Infratube Heater instructions**.

4. The reflectors on the Heaters should be kept free of dust or over-spray. Use a damp cloth or, if necessary, some fine steel wool or scotchbrite pad to clean residue off.

5. Always disconnect power before servicing electrical equipment.

6. Refer to system blueprint and Serial # when requesting parts.

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